

CLAIMS

What is claimed is:

- 1 1. A method for integrating a Wireless Local Area Network (WLAN) and a
- 2 Wireless Wide Area Network (WWAN), the method comprising steps of:
- 3 sending a Service Request message from a terminal to an Access Point (AP);
- 4 starting a WLAN access procedure between the terminal and the AP;
- 5 sending a Remote Authentication Dial-In User Service (RADIUS) Request
- 6 message from the AP to a WLAN Serving Node (WSN), the RADIUS Request message
- 7 including terminal's credentials;
- 8 proxying at a RADIUS proxy capability of the WSN the RADIUS Request
- 9 message;
- 10 authenticating the terminal at the WSN using the terminal's credentials; and
- 11 managing at the WSN access control for the terminal.

1 2. The method of claim 1, wherein the method further comprises steps of:
2 locating in the WWAN a Home-Authentication, Authorization, and Accounting
3 (Home-AAA) server;
4 sending a RADIUS Request message from the WSN to H-AAA, the RADIUS
5 Request message including the terminal's credentials;
6 authenticating the terminal at the Home-AAA; and
7 sending from the Home-AAA to the WSN a RADIUS Request message, the
8 RADIUS Request message including a key information.

1 3. The method of claim 2, wherein the method further comprises steps of:
2 receiving the key information at the WSN; and
3 sending from the WSN to the AP a RADIUS Accept Response message, the
4 RADIUS Accept Response message including a key information.

1 4. The method of claim 3, wherein the step of receiving comprises a step of
2 generating a key at the WSN for encrypting and decrypting traffic of packet data
3 between the WSN and the terminal.

- 1 5. The method of claim 1, wherein the step of starting further comprises steps of:
 - 2 sending from the AP to the terminal an Extensible Authentication Protocol (EAP) Request message; and
 - 4 receiving at the AP an EAP Response from the terminal.
- 1 6. The method of claim 5, wherein the step of receiving further comprises steps of:
 - 2 granting access to the WLAN to the terminal; and
 - 3 sending an EAP Success message from the AP to the terminal.
- 1 7. The method of claim 1, wherein the step of managing further comprises steps of:
 - 2 starting counters in the WSN; and
 - 3 sending accounting information from the WSN to the Home-AAA.
- 1 8. A Wireless Local Area Network Serving Node (WSN) for authenticating a terminal, the WSN being capable of:
 - 3 receiving a Remote Authentication Dial-In User Service (RADIUS) Request message from an Access Point (AP), the RADIUS Request message including terminal's credentials;
 - 6 proxying the RADIUS Request message at a RADIUS proxy capability;
 - 7 authenticating the terminal using the terminal's credentials; and

8 managing charging operations for the terminal.

1 9. The WSN of claim 8, wherein the WSN is further capable of:

2 locating in the WWAN Home-Authentication, Authorization, and Accounting
3 (Home-AAA) server; and

4 sending to the Home-AAA a RADIUS Request message, the RADIUS Request
5 message including the terminal's credentials.

1 10. The WSN of claim 8, wherein the WSN is further capable of receiving from the
2 Home-AAA a RADIUS Response message, the RADIUS Response message including a
3 key information.

1 11. The WSN of claim 10, wherein the WSN is further capable of using the key
2 information for generating a key for encrypting and decrypting traffic of packet data
3 between the WSN and the terminal.

1 12. The WSN of claim 8, wherein the WSN is further capable of:

2 sending a RADIUS Response message to the AP, the RADIUS Response
3 message, the RADIUS Response message including key information.

1 13. The WSN of claim 8, wherein the WSN is further capable of:

2 starting counters for accounting; and

3 sending accounting information to the H-AAA.